OFFICE OF CONSERVATION
STATE OF LOUISIANA

IN RE: GROUND WATER
MANAGEMENT COMMISSION MEETING

REPORT OF MEETING
HELD AT
BATON ROUGE, LOUISIANA
MAY 15, 2002

OFFICE OF CONSERVATION
STATE OF LOUISIANA

IN RE: GROUND WATER
MANAGEMENT COMMISSION MEETING

Report of the public meeting held by the Ground Water Management Commission, State of Louisiana, on May 15, 2002, in Baton Rouge, Louisiana.

COMMISSION MEMBERS IN ATTENDANCE:
Karen Gautreaux, Chairman
Phil Boudreaux, Commissioner of Conservation
Zahir "Bo" Bolourchi, DOTD - Water Resources
George Cardwell, Capital Area Ground Water Commission
William "Bill" Cefalu, Police Jury Association
Richard Durrett, Sparta Groundwater Conservation Dist.
Steve Chustz, DEQ
Fulbert Leon Namwamba, Geologist
Brad Spicer, Agriculture & Forestry
John Roussel, Assistant Secretary Wildlife & Fisheries
Linda Zaunbrecher, Farm Bureau Member
Len Bahr, Governor's Office of Coastal Affairs
Dean Lowe, Department of Health and Hospitals
Mike Taylor, Department of Economic Development

AGENDA

I. Call to Order - Karen Gautreaux
II. Update on Ground Water Management Staff Activities - Anthony J. Duplechin, Jr.
Contract Renewal Process; Fiscal Year 02/03 for Part 2.
III. Consultant Report; Draft of Part 1
IV. Commission Question and Comment Period
V. Ground Water Management Advisory Task Force Committee Reports
VI. Advisory Task Force Question & Comment Period
VII. Old Business
VIII. New Business - Public Hearing regarding Rules of Procedure, Wednesday, May 29, 2002, 1:30 p.m.
IX. Schedule for next meeting - Wednesday, May 20, 2002
X. Adjourn

GROUND WATER MANAGEMENT COMMISSION
MAY 15, 2002
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COMMISSIONER GAUTREAUX:
Let's call the meeting to order. What I'd like to do at this point is go around and let the Commissioners introduce themselves. But I would like to make note that we have a couple of new official members of the Commission, so I'll let them introduce themselves, from DED and DHH. Linda, you want to start?

COMMISSIONER ZAUNBRECHER:
Linda Zaunbrecher representing Louisiana Farm Bureau.

COMMISSIONER CARDWELL:
George Cardwell, Capital Area Ground Water Commission.

COMMISSIONER DURRETT:
Richard Durrett, Sparta Groundwater Commission.

COMMISSIONER BOLOURCHI:
Bo Bolourchi, DOTD, Water Resources Group.

COMMISSIONER BOUDREAUX:
Phil Boudreaux for the Department of Natural Resources.

COMMISSIONER GAUTREAUX:
Karen Gautreaux, Governor Foster's office.

MR. CHUSTZ:
Steve Chustz, DEQ.

COMMISSIONER BAHR:
Len Bahr with Governor Foster's office.

COMMISSIONER ROUSSEL:
John Roussel, Department of Wildlife and Fisheries.

COMMISSIONER TAYLOR:
Mike Taylor, Department of Economic Development.

COMMISSIONER NAMWAMBA:
Fulbert Namwamba, geologist/engineer.

COMMISSIONER LOWE:
Dean Lowe. I am a new member of the commission replacing Dr. Jimmy Guidry, with Mr. Hewitt's and Dr. Guidry's congratulations and approval.

COMMISSIONER SPICER:
Brad Spicer, Louisiana Department of Agriculture and Forestry.

COMMISSIONER GAUTREAUX:
Thank you. Our first item on the agenda is the update on Ground Water Management staff activities, and Tony Duplechin is going to give us that update.

MR. DUPLECHIN:
Thank you, Karen. I'll go over the usual things that we go over with the staff report, and then go into more detail about some of the more important things that are going to be happening here shortly.

The staff has received an additional 90 water well information sheets as of April 30, 2002, bringing the total number of registrations, and I hate to use that word, to 369. Of these, seven just cause waivers were issued for reasons of short notice, or in some cases drillers and owners wanting to install a well before rains came; 27 forms were received less than 60 days prior to

the anticipated well installation date and for which the owner did not request a just cause variance; and three forms were received after installation, but these were for monitoring wells and recovery wells.

As far as the website goes the usual items were updated since the last meeting; these being, summary and transcript of the Commission meeting and summary of the Task Force meetings. We've also updated announcements and agendas for Commission and Task Force meetings.

We did make several changes to the Website. The home page has been changed to list only major links on the left side banner, and we added a link for critical ground water areas. This link goes to information regarding application status, hearing information and Commission findings. I know we don't have any pending applications for critical ground water areas, but we thought it was time to add a link to that and be ready for when one does come in. We have included a link to press releases and other related documents, and we have also included a link to the DOTD well registration web page and the National Drought Mitigation Center, we have a link to them so that people can click on there and see what the current Palmer Drought Index map looks like for the United States.

During the last two months members of the Ground Water Management Commission staff have attended several meetings. Last week I attended a meeting of the Sparta Ground Water Conservation District Commission up in Ruston at which their consultant, Meyer, Meyer, LaCroix and Hixson, presented recommendations for alternate water supplies in the area of the Sparta aquifer. Prior to this the staff had developed a generic notice of intent as a guide for the filing of critical groundwater area designation applications. The Sparta Ground Water Conservation District Commission is currently in the process of having such a notice of intent published in the official journals of the parishes affected by their forthcoming application to have part of the Sparta Aquifer declared critical.

At the Sparta Commission meeting last week I was asked whether or not I would discuss Meyer, Meyer, LaCroix and Hixson's recommendations, to which I replied that it would be premature at this time to do so as the Sparta Commission has not yet made an application for a critical ground water area designation.

Yesterday Tim Seiler of my staff attended the NOAA workshop in New Orleans for Mississippi River Basin stakeholders. And tomorrow I'll be speaking to the Louisiana Ground Water Association at their continuing education seminar, and then we'll drive up to West Monroe to go to a public hearing on the aforementioned Sparta Aquifer recommendations.

In an attempt to help spread the word about well information notification, the staff has developed a fact sheet which is on our Website, and have been working on several brochures for distribution to the general public. The outreach subcommittee has been very helpful in reviewing these informational tools. There should be draft copies of these brochures in each of your packets.

The staff has spent considerable time preparing the proper documentation for renewing the emergency rules for a third time. These are the rules for the conduct of hearings for critical ground water designation hearings. The notice of intent was delivered to the Office of the State Register on April 10th along with a copy of the emergency rules, and they were published in the April 20th edition of the Louisiana Register. The staff also prepared notice for a public hearing on the proposed final rules, which was published in the same edition of the Register, April 20th, in the Potpourri section. This public hearing shall be held as the first order of business during the May 29, 2002, Commission meeting. Copies of these documents are in your packet as well, and we can discuss any of these if we need to under new business.

Finally, the staff had received the preliminary draft of the Part 1 deliverable from our contractor, C.H. Fenstermaker and Associates. After a cursory review of the document was made, approval was given to send the draft document to the Commission and Task Force, one copy to each Commissioner and one copy to each of the Task Force Committee chairs. The Office of Conservation also received three copies. In addition, a copy of the submittal is available on the Website hosted by C.H. Fenstermaker and can be found at www.la-water.com.

When the Request For Proposals No. 2215-02-01 was sent out in September of last year it included a scope of services that were to be provided by the successful proposer in assisting the Commission with the development of a comprehensive statewide water management plan. A copy of this scope of services, which the Commission approved at the August 20th meeting last year, can be found in the information packets passed out today. The scope of services stated that the work done would be split into two parts; Part 1 would identify the state's water resources and assess their current use and general scientific information available to include, but not be limited to, the following tasks, and I may paraphrase here: a general evaluation of the state's groundwater resources including current and projected demands, aerial extent, recharge areas, historic groundwater use and water quality on the major aquifers, i.e. Sparta, Chicot, Southeast Louisiana, et cetera, of the state as obtained from existing publications; 2, a determination of data necessary to manage the state's water resources and the sources of such data, including but not limited to, water level, water quality and water use; 3, identification of the data necessary to determine sustainability of each major aquifer and predict critical ground water areas, including, but not limited to, identifying which aquifers' current and projected water use is greater than its recharge; 4, development of alternatives to ground water use, including identification of the surface water resources for the potential critical ground water areas; and 5, an evaluation of the state's surface water resources available for development.

During the contract negotiation process, once C.H.

Fenstermaker was awarded the contract, an addendum to the scope of services was mutually agreed to clarifying the scope and content of the deliverables. This addendum was made part of the contract. A copy of that addendum is stapled to the back of the scope of services, both of which are in your information packets. Among other things, the addendum specified the type and nature of maps that would be submitted, historic and projected demands on Louisiana's aquifers, tabulation of data available to be used in making critical ground water area determinations, identification of any potential critical areas, and a preliminary discussion of water resource management options.

Part 2 of the groundwater or comprehensive statewide water management plan was to establish considerations, guidelines and procedures for the effective management of the state's water resources and data collection to include, but not be limited to, the following tasks: a general evaluation of the use of surface water, recycling of used or treated waters, identification and development of surface water projects to meet current and future demands as obtained from existing publications; 2, evaluate incentives and alternative technologies for conservation of water resources; 3, development of an emergency use and contingency plan; 4, development of an education and conservation program; 5, development of a program to provide mitigation for loss of ground water resources, and incentives to transfer from ground water sources to surface sources or alternative sources where such transfer will not harm the surface water sources; 6, identification of areas where inter-jurisdictional relationships will be necessary; 7, designation of the appropriate state entity structure to manage and protect the state's water resources, including the cost of administration and implementation; and 8, identify legal issues to be addressed.

A schedule of deliverables was included in the scope of services and further refined in the addendum. The first deliverable was a quarterly presentation -- first quarter presentation to the Commission no later than March 31st of 2002. The second deliverable was draft of Part 1 no later than April 30, 2002, and the third deliverable for the current contract is the final of Part 1 and a presentation to the Commission due no later than June 15th of 2002.

The deadlines for deliverables 1 and 2 have been met. The consultant shall present the final of Part 1 no later than June 15th based upon the comments received from the Commission and Task Force as well as the staff. I would ask the Commission to bear in mind that we're working on a very ambitious time frame if we are to present the plan to the Legislative Committees by the end of December as mandated in Act 446. The scope of services states that upon satisfactory completion of deliverables 1, 2 and 3, the contract may be extended for an additional 12 months for $300,000 to provide for completion of deliverables 4, 5, 6, and 7, and deliverables 4 through 7 are as follows: Third quarterly presentation to the Commission no later

than September 30, 2002; deliverable 5, a draft of Part 2 due no later than October 31st; deliverable 6, final presentation to the Commission during the week of December 3, 2002; and deliverable 7, the final plan Parts 1 and 2 due no later than December 21, 2002.

I would ask the Commission to review the draft of Part 1, and possibly be ready to indicate at the May 29th meeting one way or another whether or not to proceed with Part 2 by the same contractor. In accordance with Department of Natural Resources contract renewal policies I have prepared the necessary forms for continuation of the current contract with C.H. Fenstermaker for the completion of Part 2, that's deliverables 4 through 7. This continuation is contingent upon approval of Part 1 by the Commission. I have also submitted to DNR Contracts and Grants Division a revised scope of services for preparation of another Request For Proposals in the event the Commission votes not to continue the current contract with C.H. Fenstermaker and Associates. This request will not go out unless the Commission, as I said, votes not to continue with the current contract.

That ends my report.

COMMISSIONER GAUTREAUX:

Thank you, Tony. Are there any questions regarding that report from the Commissioners?

COMMISSIONER TAYLOR:

Tony, the brochures didn't get in my packet, if you could just get me copies of them.

COMMISSIONER GAUTREAUX:

Thank you. Any other questions or comments? (No response.)

One thing, and I will mention this to you during the Outreach Committee report, we're going to be asking that, speaking of the brochures, since we brought it up, that you should have received an electronic copy, but what we'd like to do is gather comments over the next -- be prepared at the next meeting on May 29th to finalize the language on these brochures. And we'll rebroadcast them as well to make sure if you didn't receive the original e-mail, hopefully you'll receive number 2, if you don't contact us.

At this point we'd like C.H. Fenstermaker to come forward. I think Raymond Reaux is going to start it off, and then Bruce Darling is going to follow-up, and they're going to be presenting the draft, Part 1.

MR. REAUX:

Thank you very much, and thank you for allowing us to address the Commission today. Today's Commission presentation is going to be kind of a two-pointed presentation. First it's going to be an overview of the draft report by Bruce Darling, and just for the sake of time it will be about an hour presentation for your consideration. But also at the completion, and certainly ask questions during the presentation if you'd like, but at the end if you have comments on the draft report that I believe all of you have received about a week ago, that will be the second purpose today.

I just wanted to do little bit of an overview. We

are six months in to the seven-month schedule, and as Karen said, we are moving quickly and trying to meet all of the deadlines, and have so far. We will be submitting the final report on June 15th, which gives us final comments from you on May 29. So two weeks from today we'll be getting together again to receive all the final comments. But we're on schedule and we're doing well. And without further ado, I'm going to turn it over to Bruce Darling.

MR. DARLING:

Thank you very much for having us address you here today to present information on the first part of our draft, Part 1 of the water plan. The plan that we submitted here is still in progress. Chapter 3 is a major chapter, and it's not complete right yet. We're working on trying to complete that so we can address issues specifically related to projections of water demand where we can reasonably make these projections. There are other things we need to clean up in the report. This is obviously a draft, a draft copy. So consider it a work in progress, but an indicator or an indication of where we're going with this report.

Since this is principally an effort to address ground water issues in Louisiana, we started off trying to think about how best to divide the state up into regions that would allow us to develop a coherent and cohesive analysis of ground water management issues in the state. And as we looked at the distributions of the major aquifers it occurred to us that the state really needs to be divided into three broad areas instead of the many smaller divisions that it had been divided into in previous efforts to develop ground water plans or water management plans in Louisiana.

Previous efforts were really based on analyses primarily of surface water resources, and so the divisions of the state were based upon the major watersheds and subdivisions of the watersheds. But since this is a ground water management plan we wanted to focus principally on the aerial extent of the major aquifers. And in looking at the maps of the aquifers we decided that the best way to approach this was to divide the state into three regions: Region I, northern Louisiana; Region II, southwestern Louisiana; and Region III, southeastern Louisiana.

Now, why these three regions. This division does not appreciably fragment three of the four major aquifers in the state, that is, the Sparta, the Chicot and what we call the Southern Hills Aquifer system; that is, it does not impose topographic or other artificial, such as political boundaries on the aquifers. It also divides relatively few of the minor aquifers in the state, and it simplifies our analysis of water use by region and by major aquifer.

Here we see a map showing the major aquifers in Louisiana. There are four major aquifers, the Sparta, the Mississippi River Alluvial, the Chicot and the Southern Hills. And you can see from this that the Sparta lies entirely within the boundaries of what we have delineated

as Region I, the Chicot lies entirely within the boundaries of what is delineated as Region II, the Southern Hills lapsed partly over into Region II, not much, and the Mississippi River Alluvial occurs in all of the three regions. The minor aquifers of Louisiana occur principally in Region I and Region II. Most of them occur up in Region I. There is some truncation of these aquifers, but since these are the minor aquifers we weren't so much concerned about keeping them within one division as we were the major aquifers.

Today I want to talk about several key issues. I can't go through this entire plan. To do so would keep us here far too long. So what I want to do is focus on what I think are the critical issues that members of the Commission and the Task Force need to walk out of here with in order to approach issues of water management and regulation in Louisiana in an effective way, primarily because we know that the Sparta Aquifer Commission will be approaching the Commission relatively soon with an application for critical aquifer status for the Sparta. And I think that by focusing on some of these issues here, which are found in the report, that we will be able to focus our attention on issues that will enable the Commission, both the Sparta Commission and the Ground Water Management Commission to address these issues in a more effective way.

Specifically we're going to look at water use and projected use. By water use we're looking at water use statewide, and then projected water use, but for detailed analysis we want to look exclusively at Region I, primarily because of issues related to the Sparta. Then we want to discuss certain legal and institutional issues that are of concern, specifically water rights and how water rights consideration -- how the consideration of water rights will factor into what might be reasonably done here in Louisiana.

We want to talk about critical areas, principally the critical area programs of other states that we have looked at. As part of our program here we've looked closely at water management plans of eight other states, and with special emphasis on how they identify or delineate and then manage critical areas. From that we would like to draw some inferences about what Louisiana might want to consider in the way it's going to approach critical areas.

Then I want to talk about water management strategies. If we're talking about water management planning you need to consider strategies as something that should be an integral part of the work. The strategy should be of a proactive nature not of a reactive nature, and what I've done here in this part of the talk is laid out a number of strategies to be considered, plus a method for evaluating the applicability and the desirability of certain strategies. And last, I'll have a few comments about data requirements. I have not completed that part of what we're doing, but I do want to throw some ideas out here regarding data requirements. There are no slides here on data requirements, and so what you'll get is

without visual aid.

I'll start off with water use in Louisiana. If we're going to manage water resources in the state you have to have some understanding of how water is being used in the state, statewide and within the different regions of the state. And so with that in mind we'll take a look at information here, the following graphs, which will detail total water use in Louisiana. The information that these graphs are based on comes off reports that were sponsored by the US Geological Survey and the Department of Transportation and Development. Both agencies sponsor a survey of water use in the state on a five-year basis. The surveys are very useful in terms of figuring out how water is being used and where water is being used within the state, not only on a parish-by-parish basis but on a sector-by-sector basis.

The graph shows that water use, total water use in Louisiana actually peaked in the year 1980 at about 13.5 billion gallons per day. The axis on the far left or the Y axis is total water use in millions of gallons per day. So since we're looking at units of thousands, these are billions of gallons of water. That was up from about 6 billion gallons per day beginning in 1960 when the first of these surveys was conducted. After 1980 water use dropped off throughout the 1980s for a number of reasons, both related to the economy and also to structural changes and how industry operated and used water in Louisiana. The low point was 1990 again, and after 1990 water use increased up to about close to 11 billion gallons per day. This is total water use.

The graph shows that most of the water in Louisiana is used or pumped in Region III, which is southeastern Louisiana. This is both surface water and ground water. Region II is number two in terms of water use, and Region III's total use of water is third, having diminished somewhat from its maximum in 1960 and another maximum in 1980 down to what we see in the year 2000.

When you look at the percentage of total use by region, Region III accounts for, in the last three surveys, approximately 70 percent of total water use in Louisiana. Again, that's ground water and surface water. Region II accounts for about 25 to 26 percent of total use, and the rest is in Region III. It's interesting to note that Region II and Region I have flip-flopped in terms of their dominance in water use over the years. As far back as 1960, Region III used more water than Region II, but about 1965 Region II supplanted Region I as the No. 2 region in the state. If we look at water use by source, and by this I mean surface water and ground water, it's clear that surface water is the dominant source of water in the state. In recent years surface water has accounted for between about 83 to 85 percent of total use in the state. So the Ground Water Management Commission is focusing its attention principally on that band of blue at the base of the graph there, the 15 to 16 percent of total water use in the state. But it's also concerned about the availability of water, that other 85-86 percent lying above there for use as a substitute in areas that

might be declared -- where ground water might be declared critical or potentially critical.

We look at total water use by user group now, and this is interesting. The surveys of water use divide total water use up into eight different categories, and they are: public supply, rural or domestic, electric generation or power generation, industrial, livestock, and irrigation. Now, irrigation really consists of three parts: there's rice, general irrigation and aquaculture. In this graph we've aggregated all three to show the total irrigation in Louisiana.

If you look at these groups as a whole, the electric generators and the industrial sector account for by far most of the water used in Louisiana. Irrigators then come in as the third most dominant group, and public supply is fourth. The rural, domestic and livestock users are really very minor. They account for a very small percentage of water used in Louisiana. So if you look at this in total, the electric generators, the industrial group and the irrigators account for most of the water used in Louisiana.

If we break up surface water pumpage, if we look at total surface water pumpage, we find that surface water pumpage follows the pattern that we saw for total water pumpage in Louisiana. Surface water use reached its maximum in 1980 at about 10,000 -- about 10.6 billion gallons per day and then dropped off throughout the 1990s as surface water use, patterns of surface water use changed. That was related to changes in the economy and, again, to changes in the way that many industries used water over that period of time. This use has increased very slightly throughout the 1990s, reaching -- it dropped down to slightly more than eight billion gallons per day in 1990 as is now up to about 9 billion gallons per day in the year 2000.

For surface water use, Region III is the dominant region. Most of this use of water, surface water in Region III is attributable to industrial production and also to electric power generation. Region II uses a significant amount of surface water, but compared with Region III it's relatively minor. Region I uses the least amount of surface water of all three regions.

Similarly, we can construct a similar graph for ground water where we find that ground water use shows a similar pattern that we find in both for surface water. Ground water use increased from 1960 through 1980, reaching its maximum usage in 1980, and then dropped throughout the 1990s on into the year 1995, and then increased up to the year, very slightly up to the year 2000. Maximum usage in the year 1980 was about 2.8-2.9 billion gallons per day. It dropped off to slightly more than 1.5 billion gallons per day in 1995, and has increased to about 1.6 billion gallons per day in the year 2000.

Now we want to focus on water use in Region I. The graphs I show you here are really only a small number of the graphs that we've generated to illustrate how water is

being used in any of the regions. Total water pumpage in Region I actually reached its maximum in 1960, and then dropped through 1970, and increased again reaching another peak in 1980 of slightly more than 1.25 billion gallons per day. Following the pattern in the rest of the state it dropped throughout the 1980s and 1990s, and increased again through the year 2000 to slightly more than 800 million gallons per day. Most of this usage was surface water; ground water was a major but secondary component of total use in Region I.

Now, this includes all sources of water in Region I. This is all the aquifers and all the surface water sources. So we're looking at total water use in Region I with all of these sources of water aggregated. Later on we break out the different sources of water to see, for example, how the Sparta Aquifer is exploited in Region I.

The percent of total pumpage in Region I comparing surface water and ground water shows that surface water accounts for about 60 percent, close to 60 percent of total use, according to the last survey. Ground water accounts, of course, for the other 42 percent. And what we see is that over this period of time from 1960 to about through the year 1995 and 2000, ground water has become a -- has accounted for a larger percentage of total water use in the region. Much of this, of course, is a function of the drop-off in surface water use throughout this region over time.

If we look at surface water use in Region I by user group we find that the electric generators are the primary users of surface water out there. Now, if you look at the bar for 1960 you'll see this nice yellow bar indicating industrial. In 1960 the USGS and DOTD aggregated both industrial and power generation. So this is not all really industrial. A good percentage of that back in 1960 was actually power generation. Public supply and irrigation, rice irrigation are also relatively significant components of surface water use in Region I.

If we look at ground water use in Region I we find that ground water use actually peaked not in 1980 but in 1985, it was slightly higher in 1985 than it was in 1980, at about 400 million gallons per day. It dropped off through 1990, and then increased moderately throughout the 1990s, reaching slightly more than -- or approximately 360 million gallons per day in the year 2000. The dominant users of ground water in Region I are the rice growers, farmers who are involved in other areas of irrigation, and aquaculture. Industrial use is fairly significant, as is public supply.

Now, we have to look at how water is used -- how different aquifers in Region -- or the demands on the different aquifers in Region I in order to understand where most of this water is really being used, ground water that is. There are seven major aquifers that we've identified, or seven aquifers in Region I: the Sparta, the Mississippi Alluvial; of course, the Mississippi Alluvial extends under Regions II and III; the Upland Terrace Aquifer, it's actually a series of aquifers; the Carrizo-

Wilcox Aquifer, the Red River Alluvial, the Cockfield Aquifer and the Catahoula. Most of the pumpage of ground water in Region I is attributed to the Sparta Aquifer and the Mississippi Alluvial. The Upland Terrace Aquifer would be the third most significant aquifer in the region.

Now, the Mississippi Alluvial really is exploited primarily for irrigation and some industrial purposes. It is the Sparta aquifer that is a principal aquifer or the principal aquifer outside of that for 16 parishes, approximately 16 parishes in northern Louisiana. Its usage has increased from approximately 64 million gallons per day up to between 71 and 68 million gallons per day by 1995 and 2000.

If we look at ground water use for the Sparta Aquifer alone for all the different sectors we've identified here or the user groups we see that public supply and industrial use are the dominant sources of demand for ground water in the Sparta Aquifer. The other sectors of demand here, power generation, rural, domestic and others are comparatively minor. You can see that their total use is characteristically less than one million gallons per day for each of the reporting years 1990 through 2000. This graph is revealing here because with the pending issues in the Sparta that will come before the Commission we see that there are really only two sectors here that account for most of this usage. And so this suggests that any remedy that's crafted to address the issues in the Sparta need to be crafted very carefully because you have really only two sectors here that are going to bear the brunt of the remedy here.

If you look at the total usage on a percentage basis, the municipal sector, or let's say public supply accounts now for approximately 55, slightly more than 50 percent of total usage in the Sparta or pumpage from the Sparta. The industrial group accounts for 45 percent or so, and less than 10 percent is attributable to all of the other groups combined.

Now, we've developed graphs like this for every aquifer, but it's really not necessary to go through each one of these for north Louisiana. Suffice it to say right now that if you look at graphs for the Upland Terrace's Aquifers or other aquifers you'll find that municipal supply is the principal source of demand for most of these, with the exception of the Red River Aquifer which I throw up here as a point of comparison to show you how some of these usage patterns within these aquifers vary. Public supply is a minor component of demand for the Red River Aquifer. The Red River Aquifer's primary source of demands are for rice irrigation, general irrigation and aquaculture. And you can see that the total draw or the total demand on the Red River Aquifer comparing that with the Sparta is significantly less than what we find for the Sparta.

Part of what we are to address here in the study we're conducting is the matter of forecasting of water use in the state of Louisiana. The Department of Transportation and Development, Office of Public Works in

years past has sponsored studies to forecast water use in Louisiana out from periods ranging for 25 years out to nearly 50 years. The objective here was to develop a basis for understanding how much water would be used in the state so that the state could then plan to have the resources developed and the infrastructure in place needed to meet this demand.

Well, as things have it, forecasts are oftentimes not on the mark, not so much because of the skills of the forecaster, but because forecasting itself is an art with a lot of room for error. The forecasts that were made in these studies were based on reasonable assumptions at the time, and they employed reasonable methodologies that their peers within this field would have employed at the time. So this is not to be taken as a criticism of the forecasters or of the methods that they employed. It's meant to be a warning that forecasts have got to be taken -- you have to consider the factors that underlie the forecast at the time that they were made, and the conditions that changed since the forecasts were made.

This graph shows -- is a comparison of the projected demands for surface water use found in the three studies compared with what the USGS actually reported for each of those years. The 1971 study projected demand out for the years 1980, '90, 2000 and 2020. The 1978 study used the year 1971 as a base year for protections, actually, 1970 as a base year for projections. The 1978 study included projections out beginning in 1978 using 1975 as a base year out to the year 2000. And then the 1982 study using 1980 as a base year, made projections, again, out through the year 2000.

Well, what do you see? Both the 1971 and 1978 studies showed robust or predicted robust demand for water, surface water in Louisiana through the year 2000 and also through the year 2020. In fact, the 1971 study estimated that total demand for surface water would be approximately 60 billion gallons per day by the year 2020. Most of this demand was projected to be attributable to electric power generation and to industrial production.

The 1978 study attempted to make some adjustments for that, but you can see that the forecasts for the 1978 study were not appreciably different through the year 2000 for we find in the 1971 study. The 1982 study, however, made significant adjustments and forecast water demand again out to the year 2020, and actually showed significant reductions in projected surface water demand statewide through that period of time. I want to move on to ground water, and then I'll come back and talk about why these projections were off the mark.

The studies also included projections of demand for ground water. And we see that the 1971 study, for example, projected that ground water demand in the state of Louisiana by the year 2020 would be above 7 billion gallons per day. For the year 2000 it estimated total demand of slightly more than 4 billion gallons per day, which is more than twice what ground water use is actually right now. The 1978 study, which actually produced

estimations for surface water use that were very close to those of the 1971 study, showed significant decreases in projected amounts of ground water use.

What happened between the 1971 and 1978 study? Well, there was some interesting changes in the nation's economy and in the state's economy. Population growth in Louisiana hadn't been as robust as has been expected to be, and industrial production and demand for water had not increased at the rate that it was projected to be in the 1971 study. So this was an effort to adjust for lower-than-expected levels of population growth and economic activity in the state.

By the time the 1982 study was conducted it became apparent that further adjustments had to be made, and you can see the projections for the 1982 study carried out through the year 2020. It showed a significantly lower level of expected demand for ground water in Louisiana than was projected for either the '78 or the '71 study. However, we note that for the year 2000 the projection of demand compared with what the USGS reported for the year 2000 was approximately 750 million gallons per day more than what the USGS actually reported.

So what was behind all this? Well, as I said, there were structural changes in the economy. Also very important were changes in the way that water was being used by industry. In the early 1970s, early 1980s, I think there wasn't much concern for recycling. There was also a bit less emphasis on some of the environmental concerns that led to different consumptive use patterns of water.

And so what this illustrates is that despite the skills of the forecasters, and I think the forecasters were very capable people, it's easy to overlook these factors that can, within a very short period of time, lead to drastic changes in the actual consumptive patterns for water. Now, how does this factor into what we're doing? Well, we're taking a good close look at these numbers that were generated before --

COMMISSIONER NAMWAMBA:

Is it safe to conclude that change in water conservation attitudes and water conservation technology is what led to more effective use of water resources from 1980 to 2000?

MR. DARLING:

That would be the case if you're talking about the industrial sector, yes. If you're talking about municipal sectors, I don't think so. But industry became acutely aware of the need to use water more efficiently, and many industries instituted water conservation methods throughout the 1980s that actually cut their consumption of water by as much as 50 percent.

COMMISSIONER NAMWAMBA:

Is there a way this development can be documented? Because it's very helpful, if it's showing the trend between 1980 and 2000 it would be good to keep in mind if there's been any change or whether it's the same measures working now, particularly to explain when the trend picks up just before 2000. I see the trend picks up and start's

going up. But it's good to just document that there was a change in '92 technology.

MR. DARLING:

That might be due to a number of factors. You might have instituted conservation measures throughout the 1980s that would have led to this major decrease in surface water and ground water use. But then as you have economic growth on top of what you already had before, then you use more water. And so over a period of time you have to look at how those conservation measures are factored in to the new industries that come in, the new businesses that develop. But certainly I think if you look at how industry used water between 1980 and the year 1995 you'll find major changes in the amount of water that was used, primarily related to the conservation measures that they employed. We find that not only in Louisiana, we saw the same thing in Texas and elsewhere.

COMMISSIONER NAMWAMBA:

Thank you.

MR. DARLING:

Moving on to this issue of water rights, I wanted to get into this because this will have a major impact, I think, on how the critical area programs are approached in Louisiana. Why am I looking at water rights? Along the way, as I said earlier on, we looked at water management plans from eight states. We wanted to understand how the other states approached water planning and water management. I've worked on a number of these. I worked extensively on the Texas water plan, so I knew how Texas was approaching this, and we've had a lot of contact with Florida as well over the years.

More importantly, though, we wanted to look at water rights issues, because water rights issues relate right back to property rights issues, and this does have an impact on how water management plans are put together, and how issues such as critical areas are identified and managed. And we thought that there might be lessons that we could learn from other states in Louisiana that would help us approach some of the critical issues related to ground water management in Louisiana.

I worked in the southwestern United States, in and out of the southwestern United States for a long time, and so I was privileged to deal with states where water rights were well established, had been well established for a long time. And I note that Southwesterners have a completely different understanding in many cases of water rights from most Southeasterners. In fact, water rights doctrines between the southwestern states and the southeastern states are oftentimes very different. But this is largely a function of the scarcity of water in the southwest as opposed to the southeast.

Well, what is a water right? In its most basic terms, a water right is a legally protected right granted by law to take possession of water in a stream, a reservoir or an aquifer, and then to divert and use that water, put that water to beneficial use. The key term here is "beneficial use." Regardless of where you are in

the United States, the term beneficial use pops up in any state that's had to address water rights issues in any way, shape or fashion.

How do you define beneficial use? Beneficial use is simply put, the use of water for any beneficial purpose, such as domestic use, irrigation, power generation, industrial production and processing, recreation, fire protection and the maintenance of fish and wildlife. The benefits vary from one location to another, and also by custom within the different regions of the country. What constitutes beneficial use additionally is often defined by the statutes of the states and also by decisions of the courts in their respective jurisdictions.

Now, I think if you look at the water rights systems in the United States you can divide them up into these broad categories. As I said earlier today, some of the legal purists might argue with me about whether there are two or three or four, but generally speaking I think everything breaks out in its clearest terms within these four categories. First are those states that follow the so-called rule of capture, and that would be states such as Louisiana and Texas, although Texas has really begun to break away from this rule of capture, and we'll explain that in a little bit.

There are those states that follow what we call an appropriation doctrine, or a prior appropriation doctrine, and that's typified by the states of New Mexico and Utah. All of these states are states whose water management planning systems we looked at during the course of our study so far. Then there are states that follow a correlative rights doctrine, and that would be states such as Oklahoma. And then there are the hybrid systems, hybrid/permit systems which we find in states such as Alabama, Florida, Mississippi and Arkansas.

Well, let's talk about each one of these. What is a rule of capture. The rule of capture is also known as the absolute ownership doctrine or the English rule. It's most common states east of the Mississippi typically where we've had an abundance of water, ground water and surface water resources to deal with over the years. Under the rule of capture doctrine, a landowner has the right to pump water in an unrestricted manner from beneath the surface of his land provided the water is put to beneficial use. There may be some reasonable restrictions on his ability to pump this water. In Texas and Louisiana a landowner cannot pump water for malicious purposes or for wasteful purposes. In Texas in particular a landowner could be held liable for subsidence on neighboring land or even on his land caused by his pumpage of ground water.

So whereas in years past the Texas courts ruled that there really was an unrestricted right to pump ground water from beneath the surface of your land, as it became apparent that pumpage actually was causing significant subsidence in the coastal areas of Texas, the courts began to realize that, yes, there were some reasonable restrictions that could be placed on the pumpage of ground water if it led to subsidence.

In Louisiana the key decision regarding the rule of

capture was rendered in 1963 in the Adams vs. Grigsby case. In Texas it goes back a bit further to 1904 in the H&TC Railroad vs. East case, and that decision has been reaffirmed on three separate occasions by the Texas Supreme Court and by an appeals court.

Prior appropriation is a doctrine that's common in western states; western states where the climate is a bit more arid, where surface water resources and ground water resources are more scarce than they are in the southeast. Typically, a prior appropriation system allocates water rights based on what we call a "first in time, first in right" principle. That is, he whose right is patented first has a superior right to anyone who comes after him. This is another way of saying that junior rights are subordinate to the senior rights in a prior appropriation system.

In a prior appropriation system a water right is a real property right, and as a real property right it is transferable. So I as an owner of -- a holder of a prior appropriation right can barter that right, can sell that right, I can use it for my economic benefit if I see fit. In fact, we find that prior appropriation states such as Utah and New Mexico, which we looked at in this study, actually encourage the transfer of water rights by landowners to maximize the economic value of the water in a state. This is called water marketing. It applies to both ground water and surface water, and it is a growing concept, a well-established concept in the west and southwest.

Typically in prior appropriation states the water right is administered by a state engineer. The Office of the State Engineer evaluates the amount of water available for appropriation, and then based upon what they deem to be there, will appropriate water to an applicant based upon the applicant's stated need for water. If there is insufficient water in a ground water basin to appropriate, they will not grant the right. And if you do not have a right, an appropriative right in a prior appropriation state you cannot pump water, unless there are specific exemptions for domestic use.

Correlative rights are most common in Midwestern states and western states, such as Oklahoma. Under the correlative rights systems the rights of landowners over a common ground water basin are considered to be coequal or correlative. In this case water can be drawn from lands overlying a common aquifer provided the amount of water withdrawn from the lands does not impair the rights of other landowners whose land overlies that basin. Typically the amount of water that one can claim a right to is tied to the amount of his land that overlies the aquifer.

As with a prior appropriation system, water rights under a correlative rights system may be transferable; so these are real property rights which have economic value, and in some cases significant economic value to landowners.

Then there are the so-called hybrid systems. Starting with the reasonable use system of Arkansas. Now,

the reasonable use system is actually nearly indistinguishable from the rule of capture doctrine. You are, under the reasonable use system, allowed the right to pump water, as much water as you need from beneath the surface of your land provided that there be some reasonably -- it be reasonably related to some use on your land. And Arkansas considers itself a reasonable use state, but also incorporates a permit system in with this reasonable use doctrine.

Then there are the pure permit systems, such as the states of Alabama, Mississippi and Florida, which have exemptions for domestic use, but which require permits for large users. And so large users are no longer able to stick a well down anywhere in the state to pump all the water that they want. They must first obtain a permit from the appropriate agency in that state.

Why is the consideration of water rights important here? Well, Louisiana is traditionally a rule of capture state. But Act 446 appears to lay the foundation for what might be a departure from the so-called rule of capture either by application of principles from prior appropriation systems, correlative rights systems or permit systems. Now, in states that have explicitly developed appropriation and correlative rights systems, the Legislature has designated these systems as their preferred methods of allocating water rights. That's not necessarily the case here in Louisiana. We'll discuss that in just a minute.

Also, there will be, there is institutional resistance to departure from the rule of capture. I've seen this in Texas when we first began to talk about water planning; industries, the agricultural industries, manufacturing, all the other industries and cities whose entire use of water had been based upon their understanding of the rule of capture were opposed to any proposed changes in any way, shape or form because it threatened their access to and use of water. You cannot expect a change of water rights regime overnight without encountering resistance from people whose use of water has been dictated by a specific system all of their lives.

Finally, then, there are problems applying different or let's say new systems to your state. So if we have -- administrative problems, for example. How do you define how certain things are done. We'll get into that in just a minute.

What does Act 446 actually say here related to all this? The Act states that the Commission shall be responsible for determinations of critical ground water areas in the state's aquifers. And that's very clearly stated, it shall be responsible. So there's no way around it. It also follows up to say that in critical ground water areas, ground water needed for human consumption and public health and safety shall have the highest priority. All other uses for ground water shall be of equal priority and limitations shall be determined on a proportional basis. Now, that language jumped right off the page at me when I read that because that sounds to me much like an endorsement of a correlative rights approach

to the administration of water rights and water management. I've discussed that with attorney friends here in Louisiana and in other states and there seems to be consensus that that is what it indeed sounds like.

The Act continues. It says, in making those determinations, the Commission shall consider the ability of a particular user to relocate to an alternative source of water and shall give particular consideration to historical users. Well, if you back up and look at that, that is an implicit endorsement of a prior appropriation approach to the administration of water rights and to the management of water. The problem here is that there really is no guidance for how you do this. What standards do you apply here in terms of deciding how you partition water out on a proportional basis under this correlative rights system in Louisiana; or on what basis do you assign priority to one user based on his claim that he pumped water from an aquifer before someone else did. These are thorny issues that the Commission and the Task Force will have to wade through, and the Legislature as well. I don't have an answer for you. I throw it out here because I think I'm obligated as a consultant to point that out to you.

The good news is that in areas that are not declared critical, and this is my writing, this doesn't come from the Act, the rule of capture doctrine applies. Otherwise the Commission must determine whether or how to define or administer water rights, or recommend the definition and administration of water rights to the Legislature, and manage water resources in accordance with systems that have not been applied in Louisiana.

A lot of this sounds like it's a difficult thing to do, but let me assure you that other states in recent years have made major changes in their approaches to the definition and administration of water rights. In 1972 Oklahoma replaced its appropriative rights regime with a correlative rights regime. In 1985 Mississippi changed its water use regime to require permits for the withdrawal or diversion of waters belonging to the state. By 1972 Florida's water law had evolved over a nearly 20-year period to require consumptive use permits for the use of water -- there are exemptions for domestic use -- and it also required regional management of water resources by water management districts.

Some of the more significant changes in water law in recent years are found right next door in Texas. In 1993 the Texas Legislature established the Edwards Aquifer Authority. This was House Bill 1477. Now, I said that Texas is considered to be a rule of capture state. By 1993 the legislature realized, under pressure from federal environmental agencies, that something had to be done to administer water more effectively in the Edwards Aquifer region in order to maintain spring flow and to maintain a source of water for the city of San Antonio. In establishing the Edwards Aquifer Authority, this covers approximately a five- to six-county area, the Act assigned an agricultural water right for the first time ever in the state of Texas of two acre-feet per acre. So this is

something similar to a correlative right assignment in the state of Texas.

The agricultural water right, like the appropriative water rights and the correlative water rights of other states, is a property right that can be traded, that can be sold. It holds real economic value for the landowner. I worked with the city of San Antonio for a year or so on a water rights acquisition program in counties to the west of the city. We dealt with landowners who initially had been resistant to the idea of having an assigned water right, but once they realized that they knew what they had and they realized that there was real economic value in this, then they were willing and able to deal with the city of San Antonio to sell water, to write water supply contracts with San Antonio or with other industries that needed to have access to water.

The Act also established the need, the requirement for permits for manufacturing and industrial use. Manufacturing and industrial use does not have a water right. It has a water permit. Only the landowner, the agricultural landowners have a water right. The water use permit here is issued based upon a demonstrated use of water over time and a demonstrated need for water over a projected period of time. So the permit is issued to an applicant for a specific purpose. The permit is not transferable, the water right is.

In 2001 the Texas Legislature affirmed that ground water conservation districts, which would be similar to the Capital Area Ground Water Conservation District in Louisiana, would be the preferred method of water management and regulation in Texas. And this came out of what we call Senate Bill 2. Senate Bill 2 gave the ground water conservation districts the authority to limit the spacing of wells, to impose pumping limits where necessary, and to require permits for the withdrawal of ground water. This is a major departure for the state of Texas, because Texas, if you go back to House Bill 1477 and then Senate Bill 2, prior to that everything in Texas was rule of capture, but because of economic growth in Texas, because of population growth in Texas, because of a lot of environmental problems in Texas, ultimately the Legislature realized that it was difficult, if not impossible, to manage water resources in an effective manner if there was not some attempt to regulate, to limit the amount of production in an unfettered manner in the state. There were areas that were seriously endangered.

Critical area programs. Of the eight states we looked at, Florida, Alabama, Mississippi, Arkansas, Texas, Oklahoma, Utah and New Mexico, we really found only four that had critical area programs that would be a fair basis of comparison for what Louisiana is attempting to do, and that would be Florida -- well, let's look at this. Those critical area programs are in the state of Arkansas, which refers to its program as the critical ground water program; Alabama refers to its program as the capacity stress area program, this covers both ground water and surface water; Florida's program is called the critical supply area program, and it covers both ground water and

surface water; and Texas has this unwieldy designation of priority ground water management areas, otherwise known as PGMAs.

The critical ground water program of Arkansas is administered by the Arkansas Soil and Water Conservation Commission. The program recognizes the existence of water quantity or water quality problems and it encourages local interests to develop plans of action, encourages them to work together to find reasonable solutions to the problems. It is, frankly, a non-regulatory program. Even though the Soil and Water Conservation Commission delineates critical areas, there is explicitly no direct regulation of ground water use in those areas. They strive for -- they instead choose to focus on conservation, education and tax incentives for the promotion of implementation of water conservation practices.

Most recently because of stresses on the Sparta Aquifer of southern Arkansas, the city of El Dorado has worked with the state to develop a pipeline to transport 10 million -- upwards of 10 million gallons of water a day for the Ouachita River to industries in El Dorado in order to take the stress off of the Sparta Aquifer in the El Dorado area. This, from what I can tell, was not done as a result of a state directive, but as a result of programs that the state of Arkansas put together to get people to work together to solve their problem.

Two areas in Arkansas have been delineated as critical as of 2002. These are the areas that have been evaluated, not all of these are critical right here, but the State of Arkansas -- the Arkansas Soil and Water Conservation has evaluated six areas. The two areas that have been delineated as critical areas are this area right here, the south Arkansas area, which borders the northernmost parishes of Louisiana, this would be contiguous with the Sparta parishes -- the Sparta Aquifer parishes in northern Louisiana, and then the Grand Prairie parishes up here in East Central Arkansas, which includes part of the Sparta up in that part of Arkansas. This area right here, the Cache River area is also recommended for critical aquifer status, but I don't know really where they are at that time. These other three areas are under study.

Alabama's capacity stress areas program is an interesting one. Capacity stress area in Alabama is defined as an area where the use of ground water, surface water or both requires coordination, management and regulation. It's administered by two state offices in Alabama; one, the Alabama Office of Water Resources and the Alabama Water Resources Commission. The Alabama Office of Water Resources is the office where the hydrologists are employed who conduct the studies, the management studies for the state of Alabama. The Alabama Water Resources Commission is an appointive body consisting of I think 17 or 19 commissioners appointed by the Governor and the Lieutenant Governor and the Speaker of the House. The OWR identifies the potential stress areas, and the Water Resources Commission reviews the

recommendations, conducts hearings and issues rulings, much as the Commission in Louisiana is charged with doing. In this case there is not an equivalent agency in Louisiana, such as the Office of Water Resources. It is up to the individual petitioners in this case to fulfill that responsibility.

The Alabama capacity stress areas program is really untested. As of 2002 there have been no capacity stress areas designated, but there are several studies ongoing now by the Office of Water Resources, and I expect to see something come out of this probably within the next year to two.

The critical supply areas program of Florida is administered by the five water management districts of Florida. The CSA program in Florida addresses current or projected shortages of water for water supply or for environmental needs. Thus, if the water management districts have determined that there is insufficient flow to maintain aquatic life in the stream systems of Florida, they can institute a designated capacities critical supply area. Likewise, if there are threats to public water supply from the encroachment of saline water or from falling aquifer levels, they can institute a critical supply area -- designate a critical supply area as well.

Wherever a critical supply area is identified, the water management district prepares a regional water supply plan in cooperation with a number of public entities including local governments, public utilities and everybody else on that list up there. The public participation here is expected to identify data gaps and to improve the entire RWSP process. I'll tell you that despite the fact that it is intended to work that way, a common complaint in Florida is that in many cases the water management districts are very imperious and pay little attention to public input along the way.

The water management district after hearing public input, then issues a report on its findings along with its orders, and then sends the orders to the Florida Department of Environmental Protection for administration. Of course, the rulings, the orders can be challenged, but there have not been many cases in which the courts have sided with the petitioners.

Now, Texas' priority ground water management areas program evolved over a period of time, over a period of some 20 years. A PGMA in Texas is an area where shortages of ground water or where land subsidence are related to the overproduction of ground water, or where the availability of ground water is threatened by overproduction or contamination. The PGMA program in Texas is administered by the Texas Natural Resource Conservation Commission, otherwise known as TNRCC, and affectionately as train wreck by those of us who have ever dealt with the agency, and with the assistance of other agencies. It's a complex process. It's a process that's really criticized for its complexity, its cost to the petitioners, and also to the state agencies as well, and to the length of time required to designate a PGMA. The length of time is actually a function of the complexity

and the cost. And because of all these factors here there's some concern that the process may actually discourage interest in PGMA designations where PGMAs might actually be needed.

Since about between 1987 and 1998 the TNRCC conducted 17 PGMA studies. These are the areas that were evaluated in the state of Texas, and this is what actually came out of this. These areas were designated as priority ground water management areas. There's some people who think that there should have been a few more, but again, the complexity of the process was so difficult that many people in potentially critical areas were reluctant to proceed with an application.

Water management strategies are important here, as I said, because water management strategies are really designed to be proactive approaches to water management. In fact, water planning is really designed to be a proactive approach to water management, not entirely reactive. So what we strive to do in water planning is to look at the water needs, the water issues in specific regions of the state to identify strategies that are best suited to meet those needs and those objectives, and then to apply those strategies when and where appropriate. How do we do this? A good friend of mine at Texas A&M University worked on this in conjunction with our Senate Bill 1 water planning work in Texas and developed a process called a preference feasibility analysis, which is really a straightforward graphic method of presenting the rankings of both preference and feasibility for a number of strategies.

The process involves -- it's a simple survey that involves the ranking of a given strategy or a list of strategies on two bases, preference and feasibility; a simple numerical scale from one to five. Preference is a measure of the individual's or the respondent's interest in a specific water management strategy, such as conservation. Feasibility is based on his understanding of the technical and legal limitations underlying its application. So you might have something that has -- a strategy that will have a high ranking for preference, but it might have a low ranking for feasibility, or they might both rank high in both categories or low in both categories. This is significant because it allows you to look at what -- it gives you a snapshot of what the public's understanding of these issues are, or public's understanding is, and it allows you to tailor public education programs to meet specific needs of specific regions, and it also gives, in this case the Commission and the Task Force, a basis for approaching the Legislature with sound recommendations for water management policies in the state, water management policies that can be tailored to the specific needs of different regions of the state of Louisiana.

I'll give you an example of how this operated in Texas and tell you how I think we might apply it in Louisiana. The state of Texas was divided into 16 water planning regions designated A through whatever, L, I believe, and the survey was disseminated to members of

water planning groups throughout these 16 regions. The analysts looked at responses statewide, and then divided them up by region to see how the responses varied from one region to the other.

Here is an example of the strategies that were submitted to all of the regions. There were 20 strategies. You might not use the same strategies for Louisiana because some of these things might not really be applicable here, such as brush management or cloud seeding, you might have other strategies that you would include there. But this is the list of 20 recommended strategies that everyone who looked at this survey was asked to rank both for feasibility and for preference on the scale of one to five. Backing up a little bit, that preference feasibility action grid really shows you where, once you plot this out, how you would interpret whether or not that particular strategy is one that should be adopted or whether it's one that would have a high preference but a low ranking for feasibility such that if you considered it something that might be a real strategy to develop in an area, you might want to target to develop a public education program or public awareness program that would actually help move that out over a period of time so that you would have a real understanding of how then to develop a public education program that can reach out to the public and help them understand what some of the key issues involving -- the technical issues involving water management are.

This is a statewide grid. This includes all 16 regions, and you can see how the 20 strategies ranked. Statewide the highest ranking went to the reuse of treated waste water. All others tended to fall back, with the exception of 15, which was require industrial water reuse systems, fell back here in an area where there was a low preference and low feasibility, indicating that state wide residents in many areas of Texas really didn't understand much about these strategies, suggesting that the water development board and other agencies in the state of Texas might want to work on certain of these strategies to improve public awareness of how they might actually contribute to water management in the state of Texas.

Now, if we look at specific regions, the far west Texas region, which includes the city of El Paso, you find that things look very different. This is an arid region of the state of Texas, and you find that strategies such as reuse of waste water, reuse of industrial water systems, brush management and residential greywater reuse ranked rather highly, whereas others didn't. And much of this is a function of their understanding of the specific needs in their region of the state. As you move off into other regions of the state where the issues are very different, you find that the rankings change. In east Texas, and these are the counties that border western Louisiana, you find a different ranking here. In fact, the highest-ranking system there was build new reservoirs. Well, they wanted to build new reservoirs there because they have the water to build new reservoirs. And also require water-efficient appliances.

If you then move into the central Texas area, the Lower Colorado River Authority area, Lower Colorado River area, you see a very different pattern right here. And what this really suggests is that depending on where you live and depending upon the issues that are significant in your region, your understanding of what's preferable and feasible will differ from those of another region, and that's exactly what this is showing. How this can help is that by running surveys like this over time in conjunction with public education programs you can get the public to focus on key issues such that by involving them in this process they are better able to make recommendations to planners that actually make sense to them. So it actually sets up an interactive process between planning groups, such as the Commission and the Task Force and the public so that the Commission here or the planners are better informed, and also better able to make recommendations to Legislators about what policy recommendations make more sense for different regions of the state.

Well, we're back to square one. I wanted to close with just a couple of comments about data requirements. As I said, we're not really completed with our analysis of data requirements, but we were looking at specifically the data required to manage or monitor ground water resources in Louisiana. We've looked at a number of different databases in Louisiana, and really it boils down to about three databases that are most significant. The database maintained by the Department of Transportation and Development, which is a substantial database of water wells, the USGS database, and also the Department of Environmental Quality database. The Capital Area Ground Water Conservation Commission maintains a database that is also I think part and parcel of your database for DOTD.

But when you look at all the sources of data combined in Louisiana, and you look at what other states have done to develop ground water management programs, it really boils down to a very few things. You need to have reliable water level information, you need to know where your wells are. You need to have reliable water level information on a regular basis. In many areas you need to have water information, water level information on maybe a monthly basis or a quarterly basis, at a minimum on a yearly basis for most wells. You need to have reliable water quality data. You need to have some indicators of total dissolved solids, and in many areas of the state you might want to have more complete analyses of chemical constituents. So that if you then look at what the database maintained by the Texas Water Development Board or the Arkansas Soil and Water Conservation Commission, I think you'll find good analogies for what Louisiana might want to strive for long term.

We're not finished with this part of the analysis. We're going to take a closer look at that. I need to talk with Bo Bolourchi and others here to see what the feasibility of combining databases might be, but at a minimum I can say unequivocally that these three agencies in the state of Louisiana really have the basis of a database that would be needed to monitor ground water

resources long term in the state.

Having said all of that, I'm open to questions that anybody might have.

COMMISSIONER GAUTREAUX:

Do any of our Commissioners have questions or comments?

COMMISSIONER DURRETT:

Bruce, Richard Durrett. Is your study -- and I'm looking back, is your study going to make recommendations on a state policy regarding how these aquifers or regions should be managed, or is it just going to identify them?

MR. DARLING:

We're supposed to look at a range of strategies that might be employed, and also in the recommendation of an agency structure that would apply to the management of water resources. I guess, yes, in that case we might. But mostly we have been asked to look at a range of strategies that might be employed to address ground water resource issues or management issues. I may have misunderstood your question, Richard.

COMMISSIONER DURRETT:

Then this Commission is going to make a recommendation to the Legislature as far as a statewide policy regarding that?

COMMISSIONER GAUTREAUX:

I think what we'll do is make recommendations for an overall policy in terms of what kinds of factors could be considered. I don't know if we'll be at the point when the legislation, the proposed legislation is delivered to the Legislature where we would say we recommend, X, X, X strategy in Region I, say. Now, Region I is going to be a little different in that we may actually have management measures through the critical ground water area designation. So there could be a chance that there will be those, but --

COMMISSIONER DURRETT:

Well, rather than saying management policies, I guess my question is, for instance, Capital has their authority to manage their aquifer. Is the statewide policy going to make recommendations whether other aquifers should have that authority, or whether the state --

MR. DARLING:

Let me answer that first. I think part of what we're going to do is examine that as one possible model for water management in Louisiana. I don't think that there's one model to follow, there are a couple of models. There are regional based models that frankly I like a great deal. I tend to shy away from the highly centralized approaches to water management that you find in states such as Florida. Even though they are somewhat regionalized, they are also very autocratic. Certainly, looking at regional based water management plans that might fall under the direction -- under the umbrella of a state or agency, such as a commission, is something to be considered for Louisiana.

COMMISSIONER GAUTREAUX:

I'd like to add, too, I think that our initial instructions through Act 446 is that we have a consistent

statewide policy with variabilities for local conditions and local entities. So I could see, again, the umbrella laid out recommending that this is how we think it should -- these issues should be dealt with. But in terms of laying out in that particular piece of legislation, the other Commissioners may want to chime in at this point, but I was thinking it would be more in terms of this is the way we will lay out the procedure, this is where there are opportunities for variables that can -- depending on local conditions can be utilized to manage resources in that area. But that's more of my view in terms of we want a consistent statewide policy with ability for local input. And I guess we'll be developing and we'll be discussing those issues as we finalize our policy recommendations over the next six months.

MR. DARLING:

And that's actually a part 2 item that comes out of the work that we do here.

COMMISSIONER GAUTREAUX:

Right. We'll be discussing that very actively throughout development.

COMMISSIONER DURRETT:

Just a point, different aquifers have different characteristics. Different aquifers have different type users, like he said; therefore, the policy -- one policy for all may not fit all.

MR. DARLING:

You can't have a one-size-fits-all policy for ground water, or surface water for that matter. You have to consider the unique circumstances of a particular aquifer, the hydraulic properties of one aquifer as opposed to another. You cannot manage the Chicot Aquifer just as you manage the Southern Hills. They're very different aquifers, and for that reason it requires that you look specifically at the hydraulic characteristics of one aquifer as opposed to another before applying a management plan to that system.

COMMISSIONER BAHR:

Bruce, what have you discovered about the Florida -- with respect to Florida in terms of the Everglades program that has come online since they started dealing with water issues? I assume there have been some real --

MR. DARLING:

That's been a very controversial issue in Florida. There are efforts to reclaim parts of the Everglades in Florida. And, of course, the program in Florida really is designed to -- well, all I can tell you with any certainty at this point is that there have been a number of changes in the way that they've approached management in the Everglades in recent years. Some of that has involved reclamation of land that has been used for sugarcane farming in recent years, and that's caused a great deal of concern among property owners in Florida. But the environmentalists in Florida were quite concerned about what they regarded as non-point source runoff problems affecting other large sections of the Everglades. Now, I may have missed other parts of your question there, but --

COMMISSIONER BAHR:

No, I mean, in 2000 they got a congressional authorization for a $9 billion program, most of which involves water management aquifers, and some fairly dramatic changes, on an experimental basis how they're going to deal with this. And I'm just wondering whether that is -- those changes are superimposed on what they had already decided to do.

MR. DARLING:

I can't answer that question yet, I really don't know. The information we have from Florida was based upon conversations we've had with them over the last few months, and there really hasn't been much indication that that's had a major impact on how they're operating at that time. Now, that actually involves only about two of the water management districts, the South Florida Water Management District and the Southwest Florida Water Management District, and so it may be that they haven't worked out rules yet to address those specific issues and they haven't been able to talk with us about that at this time.

COMMISSIONER GAUTREAUX:

Before I go on to Fulbert and then Michael who had asked to be recognized, that is an important point, that while we have been focusing on ground water issues, we certainly realize the connection between our ground and surface water resources, and we do have to keep in mind as we finalize the plan other efforts, such as our coastal restoration program that are ongoing. Fulbert?

COMMISSIONER NAMWAMBA:

First of all, I would like to just give you my thanks. I like the job that you've presented. However, while I say thank you, and while I wait for a detailed analysis for Region II and Region III, there's something that I need to bring to your notice, particularly on the content of deliverables, No. 3, time charts showing historical and projected demands along with water level and water quality data for each of the major aquifers.

Now, if I look at page 520 of your report I see you had about seven sources for water quality data, five of them in digital and at least six of them in hard copy, your chemical characteristics, spacial distribution of water quality, temporal changes in water quality, ground water isotope data, sources and types of potential contamination, ground cover, land use, and stream flow quality. So those you document as being available to you.

Now, if we go to chapter 4 where you're going by aquifer by aquifer, the only information we get about water quality is a summary, and the summary, I think an area like the Sparta Aquifer, which would take, like, a quarter of the area of the state, and if so summarized, water quality, this is, say, Cockfield Aquifer, or let me take Sparta Aquifer, water quality, DEQ 1996, hardness -- it's a range -- 2 to 100; chloride, a range, 3 to 200; ion, a range, .04 to 2; and dissolved solids, a range, 70 to 800. My problem with this is this; you have an area covering, like, a quarter of the state. You are giving a

range. There is no -- you have access to spacial distribution, but there's no discussion on the specificities.

MR. DARLING:

Well, at this time this is preliminary and that's not the final version of what's going to be shown in the report. Remember, this is a work in progress and this is what was accomplished at the time that this was submitted. We are aware of that, and those issues will be addressed.

COMMISSIONER NAMWAMBA:

Okay. So I was basically bringing to your notice that in my opinion -- okay, I do notice and I believe that chapter 6, chapter 7 -- 6, 7, 8, 9, are they coming in part 2, or are they --

MR. DARLING:

Six through nine are actually all part 2 items.

COMMISSIONER NAMWAMBA:

I'm fine with that, but I'm saying that the basis which you give us for water quality does not -- we really can't make an informed decision on anything with this kind of data. Because in the end when we define criteria, discussion of criteria, 5.5, discussion of criteria and designation process, it's basically the burden of the Commission to make the decision, and they need to use data to assess a critical ground water area petition. And my plea is that, please, give us adequate information for us to be informed enough to be able to make a decision based on data that you can get hold of, summarized data -- I mean, --

MR. DARLING:

We could give you the data in the form in which it already exists. We've not been asked to, as we say, recreate the wheel. And so to the extent that those maps are available, to the extent that we can recreate something without having to start from the ground up, we can do that. But we were not charged with conducting geologic studies from the ground up. Where the data are there and where the maps are there we can certainly present that. But what you have right now, again, is in a preliminary form, and that's not the final form in which it will be presented.

COMMISSIONER NAMWAMBA:

And a minimum get us the trends, and list trends and sort of -- I don't want you to invent the wheel. I just want you to analyze the data that is there, or contextualize, it or put it in a manner that somebody can make an informed decision with it. That's my plea. Thank you.

COMMISSIONER GAUTREAUX:

Comments or questions? Mike? I'm sorry.

COMMISSIONER TAYLOR:

I too am very appreciative of the presentation both this morning and this afternoon. It's given me a context that will make it much easier for me to give meaningful feedback on this 3" binder.

I do have two concerns. The first is with the projections that you showed us from 1970, 1980. With 30 years of projections covering a 50-year period, we haven't

come close to the mark yet with a projection. Do you intend -- I know from this morning you said you're going to project again with data you've got now -- do you intend to validate your model based on past data so that we have some certainty that what you're going to project this time is going to be much more accurate --

MR. DARLING:

Certainly you have to look at past trends in order to make projections where the data can support a trend. What we're trying to pay special attention to now though are actual survey data, expectations of use by industries, for example, so that we can temper any numerical projection that we might attempt to make with what the actual expectations of the managers of those regions are. Econometric modeling is a complex process, and we are trying to apply -- I am trying to apply reasonable methods right now to make projections that I think are going to be tempered largely by our understanding of how conditions have changed in Louisiana and what expectations might be over the next five, ten, 15, 20 years.

You must understand, however, that things can change again in the next five years. And so I'm as prone to make the same errors or the same types of errors that forecasters made 20, 25 or 30 years ago. You do the best you can based on the data that you have. You make the most reasonable assumptions possible. You apply methods that are accepted by your peers. You run your models and you hope that things work out the way that you assume that they would.

You can see, however, that over a period of time each one of the forecasts missed the mark. And I would be [illegible]- frankly, I'm very skeptical of forecasts that are carried out over a very long period of time. As I said this morning, in Texas we worked with forecasts that were carried out over a period of 50 years. I don't know how we can have much confidence in something like that. Frankly, I think carrying a forecast out over a period of 20 years is stretching things way too far. Some econometricians may disagree with me on that. But frankly, if you look at the record thus far we really haven't been able to come close to what actually happened, and that's because we're really not able to read the future very well.

COMMISSIONER TAYLOR:

And that's my concern is that if we were to use any of the projections from the past to establish a policy, we would have seriously overreacted to the situation and damaged the economic performance of the state based on that overreaction. I wouldn't want to overreact.

MR. DARLING:

Certainly you can undershoot as well. If, for example, you overestimated the demand for water and then developed the infrastructure to meet that, you might have the infrastructure in place right now to supply water to areas where people need it. You might have excess infrastructure as well. On the other hand, if you had undershot that, you might not have infrastructure in areas

where it's desperately needed.

So forecasting is something that -- forecasting is more art than science. We like to dress it up as science, but really you have to look at a lot of things beyond just the statistical methods that you employ in order to have some idea where water demand is likely to go in the state over a period of time. Frankly I have as much confidence in surveys as I do in the statistical, the multivariate and nonlinear statistical models that we use.

COMMISSIONER TAYLOR:

I'd be interested in seeing a correlation between the model you develop and past performance, using data that was available at that time how well would it have done, but we don't need to pursue that any further.

My second concern is related directly to the scope of work, item 3 for part 1, which I'll read for the benefit of those who don't have it in front of them, (reading) identification of the data necessary to determine sustainability of each major aquifer and predict critical ground water areas including, but not limited to, identifying which aquifer's current and projected water use is greater than its recharge.

The recharge rate is the portion that concerns me most. When I look in section 4 of the binder, all of our aquifers are shared with neighboring states, yet all of the recharge data that you've got stops at Louisiana, or at least what's here now. It seems to me that while projecting future use is part of your scope of work, the identification and quantification of the recharge rate is really what's going to have to drive our policy because we cannot exceed the recharge rate over a long period of time. So what are your plans to identify the recharge rate with the regions that are included outside the state of Louisiana?

MR. DARLING:

Well, of course, again, we can't conduct the studies to estimate recharge. We're looking at studies that the USGS has already conducted and data that are already out there. I will tell you from my own experience in recharge areas, working recharge areas, that trying to estimate recharge is a very, very tricky business. My dissertation work in West Texas dealt with estimations of recharge and some of the bolsons in the arid regions of Texas. I concluded from my own work out there that the best you can do is come up with a number and assume that there's an order of magnitude difference one way or the other. Many recharge estimates for aquifers are based upon numerical models that use recharge to backfit in order to calibrate a model to get the modeled surface to match the measured surface in the aquifer. That depends, that assumes that all of the other inputs to do your model are accurate.

Once these things are all fitted and calibrated, then the assumption is that you have a recharge number that's reasonable for that model. There are recharge numbers that have been developed for numerical models for the Chicot, for the Sparta, and for areas of the Southern Hills by the USGS, and we're trying to acquire that right

now. We can't come up with our own, but I think the best that we can do is to report the numbers that have been developed by modelers who have looked at those issues for the major aquifers in Louisiana. Certainly, recharge areas in these aquifers extend into other states such as Arkansas. You can see where the Sparta Aquifer does extend back in there. And we can easily show those.

The issue with recharge areas in Louisiana is not so much I think trying to estimate recharge to within a reasonable degree. I just don't think that that's really possible. I think it's important to understand where your primary recharge areas are, where you have the greatest recharge potential, because what that allows you to do then is once you've identified your primary recharge areas, then you can try to develop strategies over the long term to protect recharge areas. For example, you identify recharge areas for the Chicot Aquifer. That might not be exactly where you want to put hazardous waste disposal sites, or where you want to have large capacity supply wells that will pirate the water from your recharge areas before it gets down into the confined sections of your aquifer.

So when you address the recharge areas I think you really have to look at that from a broader management concept; what are the important issues in your recharge area? In Texas they look at things such as the amount of impervious cover in a recharge area to try to diminish the amount of -- hold down the amount of impervious cover to increase the amount of water that might infiltrate down into an aquifer to keep that recharged; limiting the amount of development and the type of industrial development in a recharge area, trying to focus that off into other areas.

So the recharge numbers you're asking for are implicit or are found in the numerical models that have been developed for the aquifers, and they, of course, will be there. But I think more importantly what we need to discuss here is how do you approach management of ground water resources or management of your recharge areas for specific aquifers. If you look at something like the Sparta Aquifer, for example, the recharge areas in Sparta are not quite as extensive as those for the Chicot, or as those you find those for the Southern Hills, which may raise a completely different set of management concerns for the Sparta compared to what you find in the Chicot or the Southern Hills.

COMMISSIONER TAYLOR:

I think we would like to see those maps extended into our neighbor states because there's a strong possibility that we'll establish relationships with them in helping us to manage this, and it would help us to have that as we go forward.

MR. DARLING:

Certainly you will, and in fact, in other talks I've made I've pointed out the need to look at cooperative programs managing aquifers and recharge areas with other states. They're inter-jurisdictional issues, and of course, they're common use issues for ground water and

surface water resources that Louisiana shares with Louisiana, Arkansas and Mississippi. So assume that Louisiana can go it alone without attempting to coordinate some type of management plan with Arkansas for the Sparta, for example, or Louisiana with the Evangeline Chicot Aquifer misses the point behind water management. Aquifers do not begin and end at political boundaries. They extend across state boundaries and international boundaries. But all too often we find that the maps that we use stop at these artificially drawn boundaries. You'll notice in the beginning of the report there I comment that one reason we delineated these three broad areas is that we didn't want to chop the aquifers up into artificially small divisions that really didn't make sense to a hydrologist.

COMMISSIONER DURRETT:

There's one comment about the Sparta that Mr. Taylor might want to -- our study did include Arkansas, and all of the work we've done in meetings over the time have included Arkansas, and they worked with us also. The modeling that was done on it did include Arkansas.

COMMISSIONER GAUTREAUX:

Any other comments or questions?

COMMISSIONER NAMWAMBA:

This is just a clarification. In your maps, what does a negative potentiometric surface represent?

MR. DARLING:

That represents the feet below mean sea level.

COMMISSIONER NAMWAMBA:

So, okay.

MR. DARLING:

So -100' below sea level. There are some errors on the potentiometric maps. There are some positive numbers that ought to be negative numbers. We missed that in our editing there. But where you see a negative number, like, back up to that other map. I think it's -- this is in the Southern Hills area. You should see some negative numbers there around New Orleans, I believe, and that would be -- well, somewhere in there. Somewhere in there you'll find negative numbers which indicate that that's the feet below mean sea level at that point in the aquifer.

COMMISSIONER GAUTREAUX:

Comments? Questions? (No response.) Thank you, Bruce.

Commissioners, this morning we requested that comments or questions be sent to Tony Duplechin, and we will broadcast those comments and questions to the other Commission members, the Task Force members and those on our mailing list who are interested in the issues so that we'll have a feel for the comments and concerns, since we have such a short period, two weeks, to try to incorporate comments into the proposed final version. And what we'll do on the 29th is come back and discuss the comments we have received, the new and improved version, I guess, or as much as we can do by that time, and from that point see if we have a product that we're satisfied with or not, and then if we can't improve the product, then it will go forward and we'll receive the other one by June 15th, the

final version by June 15th, as called for in the deliverables. And at that next meeting we will also consider how to dispense with phase 2 of the project.

So any comments or questions about that? Let's say for the record, too, that Mr. Cefalu joined us.

COMMISSIONER CEFALU:

Yes, I'm sorry I'm late. I'm not going to be here on the 29th, so I'd like to make my comment now and maybe it will be straightened out by then. Having gone through as much of the material, I can understand, and of course, my background is just engineering, but I would hope that we're going to try and put something in place that has the necessary flexibility to address the needs of water resources in the state of Louisiana without impeding any businesses or municipalities, and that in doing so I'm not too concerned about the trends and the forecasts because those things change every day. I just want to make sure what we're going to do is going to be flexible enough that it can be adjusted as necessary to accommodate the needs and still, of course, protect the water supplies for the state.

My main concern is that we address those concerns and problems that we're having right now and try and put something in place that handles checks and balances without interrupting the productivity of the state or the economic development status of what we're trying to do in the future. I'm sure there are a lot of good points that can be I guess looked at a little closer concerning what's good quality water or whatever, but I'm concerned mainly that we are able to put something in place to stop the ball rolling downhill the wrong direction and at least stabilize it. And, of course, if we can get some fairly decent forecasts, and find out the necessary information on the products, the pluses and minuses of certain aquifers, we can probably address those individually. Because most of the people in south Louisiana use the surface waters, and I really don't see a major problem with surface waters, other than the fact it would be nice if it was a little cleaner, but there's no real shortage of water in Louisiana other than the fact that those using those aquifers, and I'd want to save those and make sure they're going to be good, but I don't want to put any undue burdens on anybody because of a forecast that someone says it's not going to be there when it may be there.

But basically, that's the only concern I had. And I'm going to be out of town on the 29th and won't be able to make that meeting, and I'll make sure I'm here for the next one. Thank you.

COMMISSIONER GAUTREAUX:

Thank you. I think we all share your goal of trying to develop a plan that will allow us to sustain our cultural, economic and environmental resources. And I'm sure the Legislature will encourage us to do so. So that is certainly a goal. And we all know with regard to forecasts how sudden events can change all kinds of variables. We'll just have to use the best tools and the best information we can find in trying to develop those

forecasts, and realize the purpose they serve is one information source to consider as you develop policy.

Any other comments or questions on that particular item? If not we'll move on to our next agenda item. It's been a good discussion. Thank you.

The next one is the Ground Water Management Advisory Task Force Committee reports. And I'll ask Linda to come forward with the Outreach committee report first. No? Well, two things that we discussed at our Task Force meeting this morning. I believe you probably have received electronically, or through the mail for those that don't get the electronic communications, the strategy for the Outreach committee. And there were two items that we requested that the Commissioners and Task Force members review for the May 29th meeting. The Outreach committee would like endorsement by the Task Force and ultimately the Commission in their strategy, and with that in mind, would you please look at it, and you're welcome to forward your comments on it for discussion and potentially endorsement, depending on the actions of the Task Force, at the next meeting.

And also, Mr. Owen had given a report. We are requesting -- we're going to redistribute that, and request that the Task Force members and Commissioners look at it for potential discussion at the next meeting. We also have -- I believe that was the end of the committee reports.

Now we also have an opportunity for the Advisory Task Force members to deliver comments, ask questions at this point. (No response.) All right, old business. Do we have any old business? (No response.) New business.

MR. DUPLECHIN:

The only new business that we have on the agenda here once again is, next time we meet on Wednesday, May 29th at 1:30, our first order of business will be the public hearing for the permanent rules for the conduct of hearings.

COMMISSIONER GAUTREAUX:

So that will be, again, the permanent rule. We've seen iterations of the emergency rules that deal with that designation. Now we're going to be moving forward to the permanent rule. Mr. Durrett, did you have a comment?

COMMISSIONER DURRETT:

We're in the process of advertising our notice of intent. So what are we going to do about the next step once we have done that? We have to make application not less than 30 or more than 60.

COMMISSIONER GAUTREAUX:

Right.

COMMISSIONER DURRETT:

So that's going to be middle of June or middle of July, and you had talked about a meeting. Is there going to be a meeting, or do we just bring it to you for approval?

COMMISSIONER GAUTREAUX:

That was one of the things we were talking about. We had discussed having a hearing. Now, let me say that, A,

this is a very important meeting or acceptance for the Ground Water Management Commission. We are not required to hold a meeting to accept the application, but given the nature and the importance of this particular application, both from the issue that Sparta is dealing with and the precedent that we're trying to work with, and essentially using Sparta as a guinea pig, to a certain extent, for establishing our procedures, we had discussed having a meeting to accept that application. There would be no action. We would receive the application, and give the Commission an opportunity to explain, answer questions, et cetera, et cetera. At that point, the Commission, Conservation staff will take it, declare if it's complete or not, and then come back with a public hearing as required. And then depending on the management measures that are recommended for certain areas, if the Commission makes those, we would go forward to every parish that's affected by those management measures.

Now, let me get some feedback from the Commission. Is everyone supportive of accepting the application? And we can do this as part of the regular business of the Commission as one of the agenda items. We also discussed the possibility of having that particular meeting in the Sparta area. So I would just be interested in your comments, feelings on that. What is your feeling, Mr. Durrett?

COMMISSIONER DURRETT:

It's up to you. I just know the timing has to be within that period of time, and I need to know how to plan. If we're going to have a meeting we need to go ahead and schedule one because it will be between the middle of June and middle of July; right?

MR. DUPLECHIN:

Right. One thing Mr. Durrett and I discussed earlier was since the notice of intent goes out to a number of different papers in north Louisiana, not all of which are dailies, when to start counting the 30 days. So what I thought might be best was to have no sooner than 30 days after the last publication, and then the 60 days would be 60 days, no later than 60 days from the first publication. Would that work out?

COMMISSIONER DURRETT:

Right. And probably the first publication will be this Friday, and the last one will be the following Friday.

COMMISSIONER TAYLOR:

Do you anticipate a lot of community interest? The major idea is whether we go to north Louisiana or not to have the meeting. Would you prefer that?

COMMISSIONER DURRETT:

Well, you're going to have a public hearing at a later date?

COMMISSIONER GAUTREAUX:

We are required to, right. That's what we're saying, there's an option that we would be glad to have a special Commission meeting if desired to accept the application, which is not required but perhaps might be a good thing for the Commission and the public to hear.

COMMISSIONER DURRETT:
But you're going to have a public hearing of the whole Commission at a later date?
COMMISSIONER GAUTREAUX:
Correct, it's required by the rules.
COMMISSIONER DURRETT:
Not the ones that's in each parish, but one for the whole --
COMMISSIONER GAUTREAUX:
Right. We'll have one public hearing when we come back to discuss and hear testimony regarding -- an informational meeting on the application, and then after the Commission has a chance and staff to review the information, if there are going to be management measures proposed in response to that application, then we would come back to every single parish that would be impacted by the proposed management measures. So we'll definitely have one big hearing, and then come back to each individual parish.
COMMISSIONER DURRETT:
We'll be glad to have you in north Louisiana, but I don't see the reason for everybody to come just to receive that, unless you think -- but we'll be glad for you to come.
COMMISSIONER GAUTREAUX:
You're going to have two public meetings, you might want to mention that.
COMMISSIONER DURRETT:
Right. We're having two public hearings on the study this week, Thursday night in West Monroe, at the First United Methodist Church in West Monroe, and Friday night in Ruston at the Ruston Civic Center on the study, which was presented to the Commission last week.
COMMISSIONER GAUTREAUX:
So you're essentially having two big hearings on the application process.
COMMISSIONER DURRETT:
Right. And then we're starting the notice of intent of the critical areas, we'll start publication this Friday, and hopefully it will be in all 11 of them by next Friday, if we can get them all. Hopefully they'll publish.
COMMISSIONER GAUTREAUX:
Why don't we look at your schedule, and then by the next meeting of May 29th have a plan of action.
COMMISSIONER DURRETT:
I'm not going to be here the 29th.
COMMISSIONER GAUTREAUX:
We'll work it out by e-mail, and we'll be ready to announce to the Commission the proposed path.
COMMISSIONER DURRETT:
Do we need to be prepared to make a formal presentation when we deliver that request?
COMMISSIONER GAUTREAUX:
If it's in a meeting you might want to provide a briefing and an overview, just informational. You're not required to. It might be nice to let the Commission know what's going on.

COMMISSIONER ROUSSEL:

Something to consider. In our rules we have to, within 30 days of receipt of that application, notify them of its completeness, or whether or not it's complete. So it would seem like we would, unless we want to delegate the staff to make that decision, we would need a meeting sometime within that window, between the receipt of the application and 30 days following that where the Commission would actually officially say it is a compete application, unless we wanted to delegate that to staff.

So I would suggest that maybe we would want to receive the application before we have this meeting so that we can make that decision. It's just a suggestion, rather than meet on the actual day that we receive the application.

COMMISSIONER SPICER:

We could make that decision on the 29th.

COMMISSIONER GAUTREAUX:

Well, no, it will take longer than just one day to determine if it's complete.

COMMISSIONER SPICER:

No, I meant whether we want the staff to review it or whether we wanted to.

COMMISSIONER GAUTREAUX:

Right, that's what I was thinking, we can propose a plan and have some discussion about how we're going to proceed within a couple of weeks.

COMMISSIONER DURRETT:

We would prefer making the application to the whole Commission to just kind of explain it and try to answer any questions, and then give you some time to think about it. If you just give it to the staff I don't think the whole Commission --

COMMISSIONER GAUTREAUX:

Are you going to be prepared on the 29th to do that, do you think?

COMMISSIONER DURRETT:

No, I can't on the 29th. I got to be more than 30 days. It's going to have to be June or July.

COMMISSIONER GAUTREAUX:

I'm sorry. Well, we'll --

COMMISSIONER DURRETT:

I didn't know whether you wanted to check on some dates between the middle of June and the middle of July when the Commission -- while we're here today so we can kind of get some tentative dates, or if you want to do it by e-mail, that's up to you.

COMMISSIONER GAUTREAUX:

Let's pick the dates perhaps after we leave here and then get some input from the Commissioners and see what works, and we'll let everyone know. Fulbert?

COMMISSIONER NAMWAMBA:

I just wanted to make an inquiry. I got a question from an LSU student who wanted to know some information about the Ground Water Commission, and actually I wasn't able to give an answer because I wanted to know who speaks for the Commission? Do I refer them to Tony's office, or do I refer them to you?

COMMISSIONER GAUTREAUX:

In terms of providing information, I think you're certainly welcome to give as a Commissioner your impression of something, but you're also welcome to refer -- depending on the nature of the question. If it's a Commission position on something I think we would defer to the Commission, if it's a policy question; and I would think if it's an informational question, if you can separate the two, that you could direct it to staff, direct it to me or one of the other Commissioners if it's their issue area. I don't know if that helps any. I'd be glad to look at the specific question and give you my two cents worth. Anything else? (No response.)

Any public questions and comments? Any?

MR. GRAHAM:

I just request that you consider combining the Task Force and the Commission meeting for the 29th so that we don't have a duplication of presentations, especially since we won't have the other meeting. I don't think there's much difference in the kind of information that we need for Task Force versus the Commission. Most of these folks have attended both. So instead of duplicating it, just consider that for May 29th.

COMMISSIONER GAUTREAUX:

The only thing I'm concerned about, Henry, if we do that, we particularly wanted to address the Outreach committee report and Mr. Owens' report, in terms of making the Task Force making a recommendation. So would that call for the Task Force deliberating and then passing it on to the Commission? Because I do think it should be a Task Force --

COMMISSIONER SPICER:

As a member of the Advisory committee I sure want Mr. Owens to have that opportunity.

COMMISSIONER GAUTREAUX:

Yes, we've put it off. And actually we were thinking about doing that originally, and then when those two business items came up determined that we wouldn't need, but perhaps we could limit the agenda to those two items, and then combine the items on comments on the consultant's report to the Commission meeting.

COMMISSIONER TAYLOR:

Karen, I know this morning you said that you could provide copies of this report to anybody that needed them. A couple of the Task Force folks have asked me if they could borrow mine and make copies of it so they could get it quickly. How quickly can we get hard copies to the Task Force members?

COMMISSIONER GAUTREAUX:

There are two things that may be options. Brad, do you want to respond?

MR. HAMILTON:

Yes. What I told Karen this morning was that we'd be happy -- this afternoon when I go back I will make a dozen or so copies off the CD, both 12 or 14 CDs with pdf files. I'll get them in Tony's hands tomorrow morning by FedEx, if they want to come by and pick them up from him, or if they want him to mail them or whatever. Would that be

soon enough? That's the pdf version of it.
COMMISSIONER TAYLOR:
Well, actually, reading it on the screen it's very hard to flip back and forth and check things. So it would be a specific request for a hard copy.
MR. HAMILTON:
There's a certain amount of time it takes to reproduce these things, so if you need them right away then the CD is the best. If you can wait a week or so for us to make up a dozen or for them to copy them. It's an expensive thing to do with the color photographs and everything else. So however you want to work it we'll be happy to, but I take your point.
COMMISSIONER TAYLOR:
I think a week is the problem because the meeting is on the 29th.
COMMISSIONER GAUTREAUX:
Right. What we may do, and I did mention that it might not be quite as high quality, that we would give them a copy. I'll perhaps get someone in my office. It won't be color graphs. We'll just do black and whites, and just try to make the disk available so if someone wants to do the individual color copies or something like that, they can download it. If our color copier is working in the office and it's not too big a problem, we can reproduce those graphs as well. It's just a little temperamental, but we'll see what we can do. We'll try to get to them as quickly as possible.
COMMISSIONER TAYLOR:
Do you think I should have them come by and see you?
COMMISSIONER GAUTREAUX:
If you can after the meeting just give us the names, we'll take care of them. Thank you.
Our schedule for our next meeting is going to be here, Wednesday, May 29th. If there are no other comments or questions, do we have a motion to adjourn? COMMISSIONER BOLOURCHI:
So moved.
COMMISSIONER TAYLOR:
Second.

CERTIFICATE

I, SUZETTE M. MAGEE, Certified Court Reporter, do hereby certify that the foregoing meeting of the Ground Water Management Committee was held on May 15, 2002, in the Conservation Hearing Room, Baton Rouge, Louisiana; that I did report the proceedings thereof; that the foregoing pages, numbered 1 through 84, inclusive, constitute a true and correct transcript of the proceedings thereof.

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SUZETTE M. MAGEE, CCR #93079
CERTIFIED COURT REPORTER